

## Guided Listening Example

*With every installation performance of aroundNorth a guided listening is supplied to connect some of the sounds being heard with named stars in the sky above.*

TIME	POS	STAR	DESCRIPTION	SPECTRUM	DUR
20:02:58	SE	Alderamin	<i>about 2.5x our sun's radius, &amp; visually halfway between Polaris &amp; Deneb</i>	A7IV-V	51.6
20:08:41	NE	Mirphak	<i>the brightest star in the constellation Perseus - 54 times our Sun's radius</i>	F5Ib	68.1
20:09:18	SW	Edasich	<i>a planet hosting orange star, about 12x the size of our Sun</i>	K2III	35.3
20:19:02	SW	Alphekka	<i>one of vast numbers of dwarf stars that make up our familiar constellations</i>	A0V	56.9
20:20:53	N	UU Aurigae	<i>a huge very red carbon binary star, approx 1800 light years from Earth</i>	C5II	12.5
20:21:16	S	Vega	<i>the sky's 5<sup>th</sup> brightest star and one of the closest to our planet</i>	A0Vvar	123.0
20:24:50	E	Shedir	<i>the southernmost star of Cassiopeia's chair (the giant "W")</i>	K0II-IIIvar	56.5
20:33:27	E	Van Maanen's Star	<i>a white dense and tiny star, about 1.5x Earth, no longer generating energy</i>	DG	0.3
20:38:19	W	Alioth (plough)	<i>the graceful curve of The Plough's handle</i>	A0p	68.9
20:39:53	W	Auva	<i>a giant red star in the constellation Virgo</i>	M3III	33.6
20:46:27	W	Vindemiatrix	<i>a yellow class G giant star, only a bit cooler than our Sun</i>	G8IIIvar	43.2
20:53:58	E	Mirach	<i>a cool red giant with a luminosity 1900x greater than our Sun</i>	M0IIIvar	60.7
20:56:47	S	Altais	<i>a circumpolar yellow giant in the constellation of Draco</i>	G9III	39.0
21:08:08	W	Mizar (plough)	<i>the second star of The Plough's handle - in fact, a quartet of stars</i>	A2V	56.7
21:10:01	E	Ruchbah	<i>the 2<sup>nd</sup> of the 5 stars that give us the giant "W" in constellation of Cassiopeia</i>	A5Vv SB	47.0
21:12:12	SE	Kruger 60	<i>a red dwarf - one of Earth's nearest neighbours</i>	M2V	1.4
21:25:37	SE	Homan	<i>a light yellow star on the neck of Pegasus the winged horse</i>	B8.5V	33.3
21:27:09	SE	Matar	<i>a bright yellow star in the constellation of Pegasus</i>	G2II-III..	41.6
21:29:13	NW	VY UMa	<i>a faint but giant carbon star</i>	C5II	9.4
21:31:41	W	Alkaid	<i>the end star on the handle of The Plough</i>	B3V SB	66.5
21:34:08	SE	Sadalbari	<i>the same type of star as our own Sun, but much bigger</i>	M2III	31.8
21:38:46	E	Sheratan	<i>the most prominent star in Aries, The Ram</i>	A5V...	47.4
21:45:56	NW	Merak (plough)	<i>the bottom front of the Big Dipper's bowl - one of the pointers for Polaris</i>	A1V	54.1
21:46:04	NE	Almaaz	<i>a distant supergiant, radiating 47000 times the energy of our Sun</i>	F0Ia	39.8
21:47:50	NW	Dubhe (plough)	<i>the top front of the Big Dipper's bowl - the other Polaris pointer</i>	F7V comp	67.6
21:48:00	E	Almaak	<i>a blue and yellow double star system - a treat through a telescope!</i>	B8V	59.9
21:51:16	E	Hamal	<i>a dying giant</i>	K2III	62.2
22:00:45	NE	Capella	<i>a first Magnitude double star - two giants about 43 light years away</i>	G8III/K0III	121.6

# **aroundNorth**

## *guided listening*

*Although the sounds in this installation might initially appear to sound the same, in fact there are differences in the sounds, and these differences in the sounds correspond to the stars' different astronomical parameters.*

*First of all, stars that sound for longer appear brighter in the sky. So, a short sounding star is very dim, whilst a long-sounding star would look brighter in the night sky. Any stars lasting longer than 20 seconds might just about be visible to the naked eye on a clear night. The longest sounding star in aroundNorth is, of course, Sirius – our brightest star: when it sounds in this installation it does so for a full two minutes!*

*Stars that sound deeper are bigger. That is to say they have a larger diameter. aroundNorth features stars of a range of sizes: to those roughly the size of Earth to up to 900 times bigger than our sun.*

*Stars that are louder are closer, and stars that have a crackling sound are hotter. Younger stars (the white/blue ones) have a lot of crackle, whilst older red stars have little or no crackle at all. If you are lucky you might hear a star right at the end of its life that emits very little or no light. In aroundNorth, these dwarf stars have a breathy sound.*

*Finally, astronomers classify the stars into roughly eight categories. In aroundNorth, the 'O' stars are mostly made up of a full-on sharp crackle, the 'B' stars have a wetter sounding crackle, the A stars have a finer crackle, the F stars have a softer fine crackle with more tone coming through, the G stars have some crackle and possess a shimmering sound, the K stars sound a little nasal and have a subtle crackle like bad radio reception, the M stars are more metallic sounding and are crackle free, and the dwarf stars are breathy, almost pan-pipe in character. Happy listening!!*